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BRITISH BEAN-GEESE.

By F. W. FROHAWK.

(PLATE II.)

IN his article on *Anser paludosus* (Zool. 1902, p. 441), Mr. Coburn disagrees with my statements published in the 'Field'* on the Bean-Geese (*Anser arvensis* and *A. segetum*), illustrated with the figures of the bills of these birds, which I now reproduce with the kind permission of the proprietor of that journal.

Before alluding to Mr. Coburn's remarks, I may briefly state my reasons for arriving at the conclusions I still maintain regarding the specific differences of these Geese. More than a year ago Mr. Serge Alphéraky, the distinguished Russian zoologist, honoured me with his express desire to illustrate in colour his great work on the 'Geese of Russia,' which necessitated not only voluminous correspondence passing between us on this group of birds, but the most careful examination of all specimens procurable, the result being that our notes agreed on all points of interest we found it necessary to comment upon. The enormous mass of material, amounting to all the available works published on the Geese, and the great number of specimens Mr. Alphéraky has examined, enable him to speak authoritatively on the subject, and the Bean-Geese received his most critical attention. I may say that his views on these birds agree precisely with my

* October 4th, 1902, p. 605.

own; in fact, this naturalist called my attention to the confusion existing respecting *A. arvensis* and *A. segetum* having been so long confounded as one species. To quote from his letters on the subject, he says:—"I should much like to know which is the Bean-Goose of Great Britain; I am sure that under the name of *A. fabalis* two very distinct species are confused by Count Salvadori ('Cat. of Birds,' xxvii.), one being *segetum*, the other *arvensis*." In a subsequent letter he states:—"It is true that I was quite sure that both *arvensis* and *segetum* (two very good species) must occur in England, but how could I prove it? It is only through your kindness that I learn that is a fact." And again Mr. Alphéraky says:—"I am sure that although you have in Great Britain *A. segetum* as a winter bird, it must be with you a scarce bird, as it is, according to my investigations, everywhere in Europe. I suppose that in general, to every hundred *arvensis* there exist in the world but one or two *segetum*. Such is my impression, based on a goodly number of skins from different parts of Europe and Asia. I suppose that you will find but very few British-killed specimens of *segetum* in your collections, and that *arvensis* is the Bean-Goose *par excellence* of your country in winter."

Respecting the scarcity of *segetum*, Mr. Coburn (p. 446) remarks:—"It has been suggested to me that *A. paludosus* may be identical with Brehm's *A. arvensis*. A paper on the latter bird has quite recently (October 4th, 1902) been communicated to the 'Field' by Mr. Frohawk, who endeavours to prove that this is the common Bean-Goose of our land. I cannot at present agree with him on several points he raises."

From my investigations I have every reason to believe that *segetum* is much the rarer of the two species, which is the opinion of others, among whom I may mention such experienced wildfowlers as Mr. Caton-Haigh; and Mr. J. M. Pike tells us, in the 'Field,' Dec. 20th, 1902, that during thirty years' punt-shooting he has only occasionally come across *A. segetum* out of many hundreds of freshly killed Grey Geese.

Mr. Coburn admits the similarities existing between his *paludosus* and *arvensis*, and I must confess, from the photo reproductions which accompany his article, that the pattern of colouration and the proportionate size of the nail in the bill of



paludosus agree very closely with *arvensis* ; but as the laminæ cannot be counted in the figure, and Mr. Coburn omits giving the number in his description, and without actual examination of the specimen, I will not express an opinion of its identity more than to say it resembles *arvensis* closely, as will be seen by comparing the bills in the two plates. But there is one point of difference shown : the white band of feathers at the base of the bill in *arvensis* is absent in Mr. Coburn's bird, according to the figure, unless it is the pale space between the dark band along the culmen and the forehead ; but this is not clear enough in the figures to make out, although Mr. Coburn says that it is "curiously exaggerated by the camera in figure" (p. 445).

Mr. Coburn makes special allusion to the length of neck in his stuffed *paludosus*, and seems surprised that I made no mention of the long neck and swan-like feet in *arvensis*. Surely Mr. Coburn must be aware of the danger of attaching much importance to the length of the neck of a stuffed bird. He says (p. 444) :—"For their portraits to be taken the birds were placed opposite each other on exactly the same level, so that a glance will show the extraordinary disproportion in the length of neck in each bird." There seems to me nothing remarkable in this excepting what applies to the taxidermist's art.*

Mr. Coburn also calls attention to the proportionate size of the nail in *paludosus*, saying it is "larger in proportion than that of *A. segetum*." I think if he measures the nail in each figure he will find he is wrong. The figure he gives of *segetum* is not that of a typical bird as regards distribution of colour in the bill, although, as I have pointed out in the 'Field,' the colour, as well as the number of laminæ, are liable to vary ; but the colour varies most. On this character Mr. Coburn considers I arrived at too hasty a conclusion, but perhaps he did not read the last paragraph in my article, where he will find I said :—"There is, of course, a certain amount of individual variation in each species, but the characters pointed out hold good in each, especially the great difference in the comparative size of the nail."

Respecting the variation in the bills of both *arvensis* and *segetum*, I will give an extract from a letter recently received

* Mr. Coburn in the following paper (p. 47) details his method of mounting these birds.—Ed.

from Mr. Alphéraky on the subject, which I think will prove very interesting:—"In the younger *A. arvensis* (let us say up to four or five years) the black and orange of the bill is disposed very much in the same way as these two colours are disposed in *segetum*. And this is the reason why the great confusion has arisen. The colouring being similar, people could not distinguish the two species. In such cases the form of the bill and the proportions of the nail to culmen will always (I think) help to settle the question, and often the number of teeth will also serve as a sure guide in difficult cases."

I have lately had the opportunity of making a careful examination of four freshly killed specimens of *segetum*, shot in Holland by Mr. J. M. Pike, who at once forwarded them to the British Museum. He says:—"We obtained five specimens out of a small family of six Bean-Geese. These turned out to be all well-marked examples of *A. segetum* in two old birds and three young ones." The following gives the length of bill along culmen, including the nail, and number of laminæ of these four specimens, which are true *segetum*, having the large elliptical nail so characteristic of the species, which in *arvensis* is proportionately much smaller and rounder:—

1. Ad. ♂. Laminæ each side, 21. Bill, $2\frac{3}{8}$ in.
2. ♂. Laminæ each side, 24. Bill, $2\frac{5}{16}$ in.
3. ♀. " " 21. " $2\frac{1}{8}$ in.
4. ♀. " 22 left side, 21 right. Bill, $1\frac{15}{16}$ in.

Although considerable variation exists in these four birds' bills, they are quite distinct from *arvensis*, both in form, colouration, size of nail, length of bill, and number of laminæ. Mr. Alphéraky agrees with me in saying the number of laminæ in *segetum* varies, attaining to as many as 24 in some specimens, just as occurs in *A. brachyrhynchus*, and states that he has a specimen of *segetum* from Kulguev with 24; but in the great majority of specimens of both *segetum* and *brachyrhynchus* the number is from 20 to 21.

The chief points of difference between *segetum* and *arvensis* will be readily seen by reference to the accompanying plate and following descriptions:—

Fig. 1, *Anser segetum*, ♂.—Bill (upper view): average length of culmen about $2\frac{1}{3}$ in.; nail large and elliptical—the nail has a different length in proportion to the total length of the bill in the

two species, included in the total length of culmen three and a half times; colour black, with only an orange band between the nail and nostrils in typical specimens, but the orange, as I have remarked, is subject to variation in distribution in a more or less degree, sometimes extending below the nostril, but this varies according to age.

Fig. 2, side view of same. — Culmen considerably curved, lower mandible deep and swollen about the basal third; average number of laminæ along each edge of upper mandible from 20 to 21; colour black, with orange band encircling bill in front of nostrils; nail and corresponding portion of under mandible black. As a rule, no white feathers at the base of bill, excepting in old birds, when a small frontal patch of greyish white may occur.

Fig. 3, *Anser arvensis*, ♂. — Bill (upper view): length of culmen rather over $2\frac{1}{2}$ in.; nail proportionately small and rounded, included in the total length of culmen four and a half times. Orange colour extending nearly over the whole of the upper mandible, having only a black bar commencing in front of the nostrils, and running along the culmen to the base, where it becomes paler.

Fig. 4, side view of same. — Straighter than that of *segetum*, and the lower mandible less swollen; average number of laminæ about 28 along each edge of the upper mandible; a few at each end are very small, and hidden from view by the overlapping edge when seen from the side only. Upper mandible almost wholly orange, excepting the black nail on bar and along the culmen, and one or two irregular blackish streaks on the sides. Lower mandible: end black, anterior two-fifths orange, remainder black; conspicuous band of white feathers extending along the whole basal edge of upper mandible.

ON THE SPECIFIC VALIDITY OF *ANSER RUBRIROSTRIS* (HODGSON), AND ITS POSITION AS A BRITISH BIRD.

By F. COBURN.

THE specific validity of this bird appears to have exercised the minds of systematists very considerably from 1844 until the present day. It was in this year (1844) that Gray first separated the bird from *A. cinereus*, and called it *A. erythropus*, probably from its red legs; but this name properly belonged to the Lesser White-fronted Goose. In the same year Hodgson, recognizing the many characters which separate the bird from *A. cinereus*, first named it *A. rubrirostris*, from the curious red colour of the bill, upon which I shall dilate further on. Hodgson's name was recognized by Taczanowski in 1877, but Adams in 1859, and Swinhoe at various dates from 1861 to 1870, named it *A. ferus*. In 1871, however, Swinhoe recognized the bird as *A. cinereus* var. *rubrirostris*, being followed by Dybowski in 1873-4, Przevalsky in 1878, and Seebohm in 1885. Severtzoff, in 1875, named it *A. cinereus* β *subalbifrons*, probably from the very distinct but narrow band of white at the base of forehead and sides of bill. Finally—and without following the full synonymy—Count Salvadori, in the Brit. Mus. Cat., Birds, vol. xxvii. p. 91 (1895), fully recognizes Hodgson's name, and establishes the bird as *A. rubrirostris*. This decision, however, does not appear to have met with very general acceptance by British ornithologists, some still considering the bird to be but doubtfully distinct. It will be my purpose in the present article to endeavour to prove its specific validity, and its occurrence as a rare visitor to Great Britain.

It was on Nov. 23rd, 1901, that I received from Limerick, Ireland, five Grey-lag Geese, which instantly struck me as possessing peculiar characters I had never noticed in these birds before. They looked unusually large in size, very pale in their general colouration, an unusually large amount of black on the under parts of the adults, and a very distinct and sharply defined

but narrow band of pure white at base of forehead and sides of bill, present in both adults and immature. But it was the very curious colours of the soft parts which caused me to ponder most, and to still more critically examine my birds, comparing them with my series of *A. cinereus*, and with fresh specimens of this bird. This was *before skinning* my five specimens; and I now made the important osteological discovery that the wings in all of them did not reach the end of the tail by over *one inch*! whereas in *A. cinereus* the wings not only reach the end of the tail, but, if anything, slightly overlap. Upon investigating this matter as fully as I could, I felt fairly confident that my birds must be *A. rubrirostris*, and that this one osteological character ought to be sufficient to definitely separate the bird from its near ally. When I state that the wing in the adult male gave the great measurement of $19\frac{1}{4}$ in. against 18 in. in the largest specimen of *A. cinereus* in my series—a bird I have always regarded as being a very large one—it will be readily understood that the fact of this long wing not reaching the end of tail by over one inch gives to *A. rubrirostris* a much longer and slenderer form than *A. cinereus*. This is instantly and strikingly manifest when the mounted birds are placed side by side, and one can see from structure alone that they are distinct birds. I may here say that all my wildfowl are mounted by me; I do not allow any of my assistants to touch them. Consequently all are mounted upon one principle, that being my own. I thoroughly study the anatomy of my specimens, and replace in the skin an exact copy of the body I take out; consequently I get perfect proportions to every bird, and any anatomical peculiarities are bound to show themselves. It is important that I make this statement, otherwise it might be said that this slenderer form was due to the mounting. I feel quite confident that this slender form to a large bird would be quite apparent if the living bird were seen side by side with *A. cinereus*.

I took the adult male of my five specimens, together with another Wild Goose—noticed in a separate paper*—to the British Museum, and compared it with the series of *A. rubrirostris* in the National Collection, the result fully satisfying me that my identification was correct. Some of the Indian skins

* *Anser paludosus* (ante, 1902, pages 441-8).

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were somewhat paler in the colouration of the body plumage, but it can be readily understood that birds coming so many thousands of miles from their usual habitat would be likely to show some modification in their colours. The general types of character are present in all five of my specimens.

I exhibited this bird before the June meeting of the British Ornithologists' Club, and pointed out its distinctive characters. In the discussion which followed, Mr. Stewart Baker, an authority on Indian birds, fully confirmed my identification, and gave some valuable information as to the colours of bill and legs in living specimens.

I will now give a full description of the colours of the adult male, comparing them with my finest adult male *A. cinereus*, one of three, also received from Limerick, and from the same man who sent the *A. rubrirostris*, but in January, 1896. The same type of colouration runs through the entire series of both species, so that the one can be followed just as easily as the other; in fact, they cannot be mistaken.

Anser rubrirostris. Adult male. Received from Limerick,
November 23rd, 1901.

Head and neck a delicate and beautiful shade of dove-grey gradually becoming paler on breast and under parts until the abdomen and under tail-coverts become pure white. From the lower neck to abdomen there are numerous broad patches of black, almost as black as in some specimens of *A. albifrons*. The flanks commence with the same delicate dove-grey, gradually increasing to a hoary slate, margined with pale drab and pure white. The mantle is hoary slate, gradually increasing to deep umber on the longest scapulars, all margined with drab. Back and rump a bluish slate. Upper tail-coverts white. The tail has the centres of the feathers hoary slate, fringed and broadly tipped with white, the white increasing until the outer feathers are reached, the two outer ones being almost entirely white. Outer wing-coverts very pale French grey, almost white; medians pale slaty drab, margined all round with dull white. Primary coverts have the shorter ones hoary slate, fringed and margined with white, the longer ones a velvety hair-brown, distinctly fringed and margined with white. Primaries hoary slate,

becoming almost black towards tips, the rib white. Secondaries black, delicately pencilled round with white. Tertiaries blackish umber on the inner half, outer half rich velvety hair-brown, margined with white. Alula palest French grey. Under wing-coverts and axillars pale French grey, almost white. The description of the plumage will be complete by repeating that at the base of the bill, on forehead, and at sides there is a narrow but sharply defined band of pure white feathers. This brings me now to the important soft parts, these differing totally from the other bird. The bill commences with a sharply defined crescentic-shaped band of bright scarlet lake;* from this, along culmen to nail, it is a dull crimson lake, the sides (including nostrils) dull orange-yellow, nail white. Lower mandible dull crimson, white at tip. Gular sac dull orange-yellow. Eyelid reddish brown; iride dark hazel. Legs and toes a deep reddish pinky, almost terra-cotta red. Webs darker, and nails nearly black. Length, $33\frac{1}{2}$ in. to end of tail, $34\frac{1}{2}$ to end of toes. Wing, $19\frac{1}{4}$ in. Weight, 8 lb. Wings do not reach end of tail by over 1 in.

Anser cinereus. Adult male. Received from Limerick,
January 14th, 1896.

Head and neck a brownish drab, gradually becoming a lighter drab towards breast and under parts, which are almost white, becoming pure white on lower breast, abdomen, and under tail-coverts. The under parts, across middle of breast only, sparingly blotched with black. The flanks commence with pale drab margined with lighter, and gradually become a dark umber margined with drabbish white. The mantle is a dark umber-brown, margined with pale dirty drab. Some might describe the mantle as a dark hair-brown. Back and rump a dark bluish slate. Upper tail-coverts white. Tail-feathers have the centres dark brownish slate, fringed and deeply tipped with white, the white increasing outwards, the three outer ones being almost entirely white. Outer wing-coverts French grey, with darker ribs, gradually becoming darker towards the medians, which are a slaty umber margined with dull white. The primary coverts are hoary slate margined with white for the shorter ones, pale umber margined

* Confirmed by Dr. Radde, cf. Dr. Bowdler Sharpe's 'Handbook of British Birds,' vol. ii. p. 229.

with drabbish white for the longer ones. Primaries hoary slate, becoming almost black towards end, ribs white. Secondaries a brownish black, delicately fringed with dull white. Tertiaries a blackish umber on the inner half, dull hair-brown margined with paler on the outer half. Alula French grey. Under wing-coverts French grey, with darker ribs. Axillars dark French grey. At the base of the bill on forehead there are a few ill-defined dirty-white feathers.

In all standard works the bill of this bird is described as fleshy white; and so it is after the birds have been dead for some time; but those I shot in Iceland, and which I picked up and examined before they were cold, had the bills a dull orange-yellow. This I have found to be the case with other specimens of this bird I have examined here while quite fresh. It may therefore, I think, be taken for granted that the correct colour of the bill in this species is dull orange-yellow, and not fleshy white. The legs and toes are correctly described when they are said to be pinky or fleshy white. Nails pale umber. Eyelid a pinky flesh; iride dark hazel. Length to end of toes, $35\frac{1}{4}$ in. Wing, 18 in. Weight, $8\frac{1}{4}$ lb. Wings reach slightly over end of tail.

The immature *A. rubrirostris* differs from the same stage in *A. cinereus* in several important points, but it will only be necessary to mention the colours of the soft parts. In the former the bill is a pale yellow, and the legs and toes a bright Naples yellow. In the latter the bill is a dull yellow, and the legs and toes a brownish flesh.

It will be seen from these descriptions, but much more vividly when the birds are looked at, that the general appearance of the two species is totally distinct, both in colours and build—so distinct that it seems impossible that any practised eye could glance over them and fail to notice it. The general tone of colouration in the plumage of *A. rubrirostris* is a delicate dove-grey and hoary slate; in *A. cinereus* a brownish drab and brownish umber; in short, slate colour predominates in one, brown in the other! Add to this the remarkably distinct colouration of the soft parts, and the structural features I have pointed out; then I think there need not be the faintest hesitation in accepting the bird as a perfectly valid species.

I was much pleased that Mr. Stewart Baker so completely corroborated my observations on the colours of the soft parts; he added the valuable information that he had seen specimens in which the red of the bill was running in streaks or veins into the yellow of the sides, thus showing that at certain times the bill may be entirely red, as was the case with one of my specimens. *

At the meeting of the British Ornithologists' Club a question was incidentally raised as to why this bird had been called the "Red-billed Grey-lag." A few words of explanation on this point are necessary.

During the past winter (1902) the late Mr. Ernest C. Tye, an ardent wildfowler, and whose subsequent untimely death I deeply deplore, had a friendly chat with me, when I mentioned the great numbers of Wild Geese which I had secured, incidentally naming the "Red-billed Grey-lag," but not thinking for a moment that he would consider my chatter of sufficient importance to publish. This, however, he did in his column of the 'Shooting Times' for March 1st, 1902, and this caused some correspondents of the paper to inquire what bird the Red-billed Grey-lag could be; to which I replied. I can see no reason whatever why the bird should not receive this as its common name; it is quite appropriate and distinctive, and I propose that it should be known as the

RED-BILLED GREY-LAG, *Anser rubrirostris* (Hodgson).

The Grey Geese have been a puzzle to ornithologists from the earliest times, their affinities running so close that the species have not been properly discriminated; it needed the sharp eye of Bartlett to point out the characters which separate *A. brachyrhynchus* from *A. segetum*, while this latter was for long confused with *A. cinereus*; but slight though these characters are, everyone now rightly admits its specific validity. Quite recently *A. neglectum* has been separated upon even more slender characters! These facts must not be overlooked in discussing this question; and Mr. J. H. Gurney's words, when speaking of the White-fronted Geese (cf. 'Ibis,' 1902, p. 272), are very significant and much to the point:—"And so long as the slightest difference in colour—even to the colour of an eyelid—can be found, combined (as it is in this case) with some difference of habitat, surely such birds

* The adult female.

ought to be kept asunder." These words certainly apply with great force to the case of *A. rubrirostris*.

Anser rubrirostris is an Eastern species, breeding in Siberia, and wintering in India and China. It may be asked by some, how such birds could have wandered so far from their usual course. No surprise, I think, need be expressed on this score. I have already pointed out, while discussing the case of *Anser gambeli*, that many birds are varying their lines of migration, and seeking "fresh fields and pastures new." Plenty of other birds come to us occasionally from Eastern Siberia, and why not *A. rubrirostris*? The very same time that this presumably small flock of Geese came to our shores, a Baer's Pochard (*Nyroca baeri*), from the same regions, made its appearance on Tring Reservoir! (cf. Bulletin, British Ornithologists' Club, November, 1901), and fell to the gun of the Hon. Nathaniel Charles Rothschild; thus showing that there was a divergence in the line of migration of Eastern birds at that time, and that probably other specimens of Baer's Pochard came to us, but were overlooked.

I do not regard *A. rubrirostris* as an overlooked British bird, but as a very rare visitor which has probably never occurred before. I have taken a keen interest in the Ducks and Geese for a great many years past, and I certainly think that this bird has never before occurred within my memory. Four other specimens were sent a few days later from the same man at Limerick, but I deeply regret to say that I had not then fully made up my mind as to the identity of the species, and, not wanting to have such a large number of these great birds in my collection, allowed them to pass from me. They were plucked and devoured! However, all other Grey Geese which were sent by this man from Limerick for the rest of the season I examined, and they were all *A. cinereus*. From this we may conclude that one flock of these birds visited Ireland, out of which nine were shot. The birds remained through November, when, if any of their numbers survived, they departed, probably never to return again. Nine of these birds having fallen to the gun within a few days points to the fact that they were strangers from a far-off land where they did not fear man, as our wary Grey-lags have learned to do.

NOTES ON THE SEAL AND WHALE FISHERY OF 1902.

BY THOMAS SOUTHWELL, F.Z.S.

AT the last moment, after the bulk of the men had "signed on," the sealing voyage of 1902 was in danger of being ruined by one of those modern trade disasters known as "strikes"; the men, to the number of some three thousand, refused to join their ships, or to allow others to do so, except on terms which it was impossible for the owners to grant; but happily, by the intervention of the Governor, and by mutual concessions, this calamity was averted, and the ships left fully manned after very little delay.

Much uncertainty existed as to the probable locality in which the young Seals would be found, as no ice was to be seen from the land, and it was thought that they would haul up on the heavy arctic ice farther from the shore, which indeed proved to be the case. The absence of ice on the east coast has by some been thought to be due to a change in the direction of the set of the Gulf Stream across the Atlantic, and to this also is attributed the undoubtedly milder winter climate which has been experienced of late in Newfoundland.

The first vessel to return was the 'Newfoundland,' which arrived on the 23rd March, after a very unfortunate voyage, with only 305 Seals on board. In forcing his way through the heavy arctic floe which Captain Farquhar met with, he unfortunately carried away the vessel's stem, necessitating his return, and the abandonment of the voyage.

The experience of the 'Leopard' may be taken as typical of the eastern fishery. She departed on the 11th of March, and made direct for Funk Island, encountering the loose ice on the 13th, and a few Whitecoats about forty miles N. by E. of that island; but, a gale coming on, she was jammed in the ice, and no more Seals were met with till the 17th. On the 18th the main

body of the Seals was struck about fifty miles N.E. of the southern patch, and work commenced. The ice is described as the worst ever seen; huge arctic pans were met with, and the whelping-ice was so thin as to be dangerous, constantly opening, and with "slob" in abundance—altogether different from the conditions usually experienced; "a tremendous swell was among it, and pans would split and tear asunder, throwing men into the water without warning. It was highly dangerous work, and the crews were forced to keep together." On the 22nd March the 'Leopard' finished killing, but experienced very heavy weather on the return voyage to St. John's, where she arrived on the 27th of March with 12,440 young Harps of excellent quality; the fat was said to be over four inches thick, and the pelts weighed from 65 to 81 pounds. Although at the date when killing ceased the young Seals were rapidly taking to the water, their fine condition is advanced as a proof that a day or two's delay in the departure of the vessels would be beneficial to all.

Equally bad weather was experienced at the Gulf fishery. The 'Harlaw' left Channel (Basque) on the 10th of March, and four days later struck a patch of Hooded Seals near Deadman's Island; but, as several schooners were there, and the patch not a large one, she went in search of the main body of Harps, which she discovered off Meat Cove. The greatest difficulty was experienced in getting the Seals, as the state of the ice was such as to make venturing upon it very dangerous, and the swell was too great to permit of using boats; about 8000 young Harps were, however, secured, when a hurricane came on, and she had to run for shelter to the Magdalen Islands, leaving thousands of Seals, all of large size, on the ice. The catch of the 'Harlaw' was some 8000 young Harps, and about 1000 old and 500 young Hoods, which are estimated to be equivalent to 13,000 young Harps. Other vessels suffered by the terrible weather experienced in the Gulf; the 'Algerine' had a large number of Seals panned, of which she secured some 3000, but had to run for shelter to Prince Edward's Island, and the remainder were all lost to her; many Seals were washed ashore on Prince Edward's Island, which doubtless were part of those killed by the 'Algerine.'

No vessels were wrecked this year, but the 'Newfoundland,'

as previously stated, practically lost the voyage through injuries received in the ice; the 'Nimrod' narrowly escaped being jammed ten miles off Gull Island, and was beset for fourteen days, losing a large number of panned Seals. The 'Terra Nova' and the 'Walrus' both returned with flags half-mast; the former lost a man from pneumonia, and the latter, in addition to losing one of her crew by death, landed an insane man at Bird Island Cove. These events were sad, but, in view of the risk and hardship to which 3978 men were exposed, the casualties must be considered slight.

The sealing fleet of this season was increased to twenty by the addition of the 'Erik'; 274,539 Seals were landed, valued at £80,525, the average number for the whole fleet being 13,727. Ten vessels secured more than this average, and ten less; nine had more than 15,000, and two less than that number, but over 10,000; the remainder were poorly fished, averaging only 5392. The 'Vanguard' headed the list with 25,707. The Seals were of excellent quality, even better than in the previous season, for although 70,849 fewer in number, their net weight was only 501 cwt. less; but the market for produce is not encouraging.

The Whale Fishery in the Greenland Seas has become quite a thing of the past, and in Davis Straits, the season of 1902 has been remarkable, even in this inclement sea, for weather of almost unexampled severity; the success of some of the vessels, too, was sadly marred by the disasters to others. Capt. Milne, of the 'Eclipse,' learned from the Esquimaux that a small vessel hailing from London, named the 'Perseverance,' left Cumberland Gulf on the 22nd of October, 1901, but has not since been heard of, and it is feared that she has been lost with all hands. The 'Alert' also, the last of the Peterhead vessels, a brig attached to Nobles' Station, sent out to bring back produce from the station at Cumberland Gulf, was wrecked there in September last, but happily her crew was saved and brought home by the 'Kate,' another small vessel in the same service, which had wintered there. Against this it is satisfactory to be able to state that the 'Forget-me-not,' a Yarmouth trawler, mentioned in my last notes as missing, arrived safely at St. John's, Newfoundland, on the 24th of September, having wintered in the pack-ice in

Frobisher's Bay (where she was beset in September, 1901); she was extricated from the ice and set on her way by the 'Windward' (Peary Expedition). The crew communicated with the Esquimaux, and were very successful in hunting Walrus and Musk Ox; but their voyage to St. John's was a very perilous one.

From the first the whalers met with terrible weather. Early in May the 'Eclipse' ran on a rock near Disco, and, badly damaged, put into Holsteinborg for temporary repairs; but, more unfortunately still, during a fearful hurricane, accompanied by blinding snow, the 'Nova Zembla,' in running for shelter to Dexterity Fjord, on the west side of the Straits, went on the rocks, and became a total wreck. Her crew, forty-two in all, after a terrible experience, was rescued by the 'Diana' and the 'Eclipse,' which happily were sheltering in the same neighbourhood; but for this timely assistance in all human probability the crew would have perished.

Of the five steamers which left Dundee, we have only four to deal with, *viz.* the 'Active,' the 'Eclipse,' the 'Diana,' and the 'Balæna.' The first of these visited Hudson Strait, and brought back the produce of one small Black Whale (9 cwt. of bone), killed in the month of June; a second was killed, but lost in the ice. Whales were in plenty, but so great was the accumulation of ice that it was impossible to get at them. She also had 11 White Whales, 54 Walrus, 205 Seals, and 77 Bears.

The 'Eclipse,' as before stated, had an adventurous voyage. She left Dundee on the 12th April, and experienced very bad weather at the southern fishery. On the 4th of May, when in the vicinity of Disco, and in a blinding storm of wind and snow, she struck upon a submerged rock, where she remained firmly fixed for some time, notwithstanding the exertions of her crew, and in extreme peril of breaking up in the terrible sea which broke over her; but happily the sea itself worked their deliverance, and a great wave washed the vessel into deep water again. Although badly damaged, they were able to run for Holsteinborg, where the vessel was temporarily repaired. But even in this crippled condition the brave crew did not neglect the object of their voyage, for on the 10th of May, the gale having subsided, they took their first fish. Fourteen days were lost at Holsteinborg, and, then proceeding on their voyage, the second Whale

was secured on the 20th June; a few days later a third, and in another month, operations having been much hindered by the large amount of floating ice, a fourth was captured,—all large fish. Then came the terrible weather of September, and the incident which enabled them to render assistance to the crew of the stranded 'Nova Zembla,' after which the vessel returned to the fishing-ground, and was successful in capturing yet another fine Whale on the 5th October. Of her five Whales the bone of the largest measured 10 ft. 6 in., none of them being under 10 ft. The run home was without incident, being accomplished in fourteen days; and, although attended with great hardship, the voyage was very successful, resulting in 5 fine Black Whales, 6 Walrus, 8 Seals, 31 Bears (one of which, a young one, was brought home alive), yielding 57 tuns of oil and 70 cwt. of bone.

The 'Diana' was also successful at the spring fishing. On the 28th May she captured a very fine fish, the bone of which measured 11 ft. 6 in.; a second Whale was seen and unsuccessfully chased on the same day. Later on Capt. Adams (with Capt. Milne of the 'Eclipse') successfully rescued the crew of the 'Nova Zembla,' and finally his exertions were rewarded with four other fine Whales, returning to Dundee with 5 Black Whales, 1 White, 5 Walrus, 17 Seals, and 30 Bears, the total yield of which was 70 tuns of oil and 91 cwt. of bone.

The 'Balæna' was less fortunate than the sister vessels; she did not capture a single Black Whale, but her 640 White Whales are valuable; and, in addition, she had the produce of 14 Walrus, 4 Seals, and 17 Bears—the oil of the White Whales is estimated at 65 tuns. The 'Balæna' was so unfortunate as to lose one of her crew by death, which took place at sea on the outward voyage. With this exception the health of the various crews, notwithstanding the exceptional hardships of the voyage, has been remarkably good.

The total result of the season's fishing (including the produce of 39 Walrus, 1750 Seals, 13 Bears, and 10 tuns of oil brought home by the 'Kate' from the Cumberland Gulf station) was 12 Black Whales, 652 White Whales, 118 Walrus, 1984 Seals, and 168 Bears, producing 212 tuns of oil and 187 cwt. of bone. The market value of bone is very high, transactions having taken place at £2500 per ton. Oil is selling at £22 10s. per tun, and

White Whale skin is also high. The total value of the produce may be roughly estimated at, say, £32,420.

I have no special information as to the results of the fishery from the Norwegian ports, but I am informed that the Bottlenose fishery in the Greenland Seas has not been more than one-third of that of last year. The Greenland sealing, so far as the steamers are concerned, is virtually a thing of the past; but during the past season, owing to the prevalence of heavy ice throughout the summer, affording rest and shelter to the Seals, as well as facilitating approach to them, the small sailing vessels have done very well, some making two or even three voyages. In fact, the heavy ice, packed by the long-continued E. and N.E. winds, is said to have extended south in the North Atlantic quite to the Orkney and Shetland Islands, and a large ice-floe was reported off the Treshnish Islands, and on the west coast of Mull; whereas the east coast of Newfoundland, as previously stated, has been unusually free from ice.

An extraordinary migration of Seals, said to be Bearded Seals (*Phoca barbata*), and thought to have come from their breeding quarters in the White Sea, is reported on the northern coast of Norway, and the practical failure of the winter fishery in that locality is attributed to their presence. There is great consternation among the fishermen, and it is feared that the Lofodon fishery may suffer from the same cause.

Owing to the sad death of my valued correspondent, Mr. Michael Thorburn, I am largely indebted to his brother, Sir Richard Thorburn, and to the columns of the St. John's 'Evening Herald,' for the details of the past season's sealing voyage; and to Mr. Robert Kennis, of Dundee, for those of the Davis Straits fishery.

NOTES ON THE ORNITHOLOGY OF OXFORDSHIRE.
1899-1901.

By O. V. APLIN, F.L.S.

(Concluded from p. 22.)

1901.

January 3rd.—Ring-Dove cooing, as if it were spring.

7th.—About an inch of snow on the ground ; birds are already tame.

8th.—More snow.

9th.—About four inches on the ground. Over a hundred Starlings at the birds' feeding-place.

10th.—Mild again. Mr. Warriner told me that on the 5th he saw a large flock of Wild Geese in wedge-shaped formation, flying S.W., high up, over Bloxham Grove.

14th.—A few Bramblings at Tew. Wood-Pigeons cooing frequently during the day, and the keeper there said they had cooed regularly for the last three weeks. A dozen Goldfinches feeding in bunches of ash "keys," bits of which were falling down.

23rd.—A charm of Goldfinches on the glebe farm.

27th.—Hard gale all day from W.N.W. ; torrents of rain and hail at intervals.

30th.—News from Mr. W. H. Warner of a Bittern shot at Ridge's Weir on the Isis (Oxon) on the 26th ; also of one shot at Duxford in January, 1895.

31st.—Saw two Curlews on the wing here.

February 2nd.—The largest flock of Fieldfares I have seen this season ; they have not been numerous.

5th.—Seven inches of snow on the ground.

7th.—Ten degrees of frost. Two Snipe in a ditch running through uplands at Milcomb.

8th.—Little flock of Linnets.

10th.—Slow thaw. Song-Thrush singing ; they have been

practically silent for some weeks, although there have been a few about all the winter.

12th.—Severe frost again.

16th.—Severe weather continues. A Robin's nest with six eggs found in an outhouse one day before the 14th.

21st.—Weather persistently cold, with wind in the N.; slight falls of snow and frost.

23rd.—Much milder.

25th.—Chaffinch singing for the first time.

26th.—Blackbird and Pied Wagtail singing.

March 1st.—Yellow Bunting singing. Mistle-Thrush pairing.

16th.—Song-Thrush's nest nearly finished. A cold stormy month so far.

17th. — Nice morning. Many Redwings; counted forty together, which flew away in company. One or two others singing the "trui trui trui."

20th.—Cold; N.E. wind and snowy the last two days. Saw a Chiffchaff for a moment as I was getting up.

23rd.—Still very cold. Some Bramblings; one fine old cock repeated the wheezy "weech," so much drawn out as to approach the long note or song of the breeding season.

24th.—Some Meadow-Pipits.

25th.—Ground white with snow, and more fell during the day.

26th.—Nine degrees of frost; 27th and 28th, ten degrees, and froze all day.

29th.—Eleven degrees.

30th.—Mild and stormy. A very cold March.

April 1st.—Two Chiffchaffs in the warm spot by the brook, which I always search for early ones.

2nd.—Mr. Warriner sent over an adult Kittiwake, which he had found in an exhausted condition near his house; weighed $8\frac{1}{2}$ oz.

4th.—Two Wheatears.

5th.—Blackcap in garden.

8th.—Chiffchaff in song.

9th.—Tree-Pipit.

10th.—Very wet lately; ground soaked and meadows flooded.

13th.—A Swallow reported in the 'Oxford Times' as seen by Mr. H. Webb at Oxford on the 8th.

17th.—Willow-Wren and Redstart. Chiffchaff in song for the second time only this spring. The weather turned warm to-day. I have not known the grass-fields so soaked with water for some years at any season.

20th.—Swallows appeared in the village, and a pair went at once into my barn-loft, where they always breed. Blackbird singing while perched on a thatch-coped wall.

21st.—Nightingale and Whitethroats.

22nd.—Cuckoo noisy.

23rd.—Lesser Whitethroat common; Sedge-Warbler, Ray's Wagtail, Whinchat. A White Wagtail on a ploughed field close to the village. A Nightingale in the paddock-walk again this year.

27th.—Mr. A. H. Macpherson and I saw a fine example of the large race of the Wheatear near the weir-lock, Adderbury; it appeared to be half as large again as a Chaffinch, and had a very rich buff breast.

28th.—No fewer than three Nightingales in Milcomb gorse, and four reported from the spinney and fox-cover at Tadmarton Camp, near there. The steady increase of this bird during the last few years is most gratifying; but it is as impossible to account for the increase as it is for the Nightingale practically ceasing to visit the immediate neighbourhood for many years. House-Martin; Grasshopper-Warbler. Not a Stonechat to be seen in Milcomb gorse or on Tadmarton Heath, in both of which places it was a few years ago always to be seen in spring; in the latter locality it used to be quite common, and a characteristic feature. No reason for the disappearance can be given, unless it is that the particular race of Stonechats which used to pass the summer there has been exterminated by severe seasons. The Stonechat was always a partial migrant in North Oxon, appearing in February or March, stray birds being seen very occasionally away from their summer haunts in winter, and more frequently at the time of their return in spring. We watched a Goldfinch shelling out the seeds of Scotch fir-cones.

30th.—Turtle-Dove.

May 2nd.—Could hear two Nightingales as I stood at one of the windows to-night, a thing I never did before, although a quarter of a century ago they were always to be heard about the village.

3rd.—We have four round the village, perhaps five, besides those at Milcomb gorse.

4th.—Garden Warbler.

6th.—Saw a Swallow sitting on the top twig of a fairly high hedge. Mr. Blea told me about the numbers of Golden Plovers which used to visit the high-lying arable land on this side of Chipping Norton thirty or forty years ago.

June 4th.—Arrived home after four weeks' absence. Song-Thrush singing while sitting on the ridge of the house-roof. Red-backed Shrike near Springfields, Banbury, close to one of the three favourite localities of this bird about here.

5th.—Song-Thrush again singing from the roof-ridge, and my man says that it has done so for three days, sitting there for hours from late in the afternoon.

6th.—Examined a Red-backed Shrike shot near Banbury.

8th.—Some young Rooks still in the nest.

10th.—Shot some branchers out of two or perhaps three nests.

15th.—Found at Kingham a half-finished Marsh-Warbler's nest. I saw it again on the 22nd, when it contained four eggs. This nest was hung to two stems of the meadow-sweet, and was close to an osier-bush. The "handles" by which the nest was hung to the stems were very remarkable; the attachment of one of them to the stem was nearly two inches above the lower, or normal, portion of the rim of the nest; of the other (most of which was passed round the stem), over one inch. The nest was formed of round stems of grass, with two bits of cotton-thread (one of several strands) about the rim; it was lined with finer grass and some hair. No moss in this nest.

17th.—Some Gulls seen in the Cherwell meadows near the weir-lock, Adderbury. They are very unusual visitors at this season.

22nd.—Young Rooks "squawking" from a nest in the Middle-ground rookery, and still there on the 24th.

24th.—There is a small oak spinney in this parish which I have known well all my life. I always wondered that the Wood-Wren did not visit it, and many a time I have looked for the bird in vain. To-day I was passing the spinney at some little distance when the well-known song caught my ear. I watched the bird for an hour or two, and I believe searched every foot of ground

anywhere near the trees he frequented. But I could not find the female or the nest, and I am inclined to think that the male had strayed here alone. I may say here that I searched for it in 1902 in vain, and that I do not know any locality frequented regularly by the Wood-Wren nearer here than Tew, about four or five miles away, although I have observed it at Tadmarton Heath spinney, not quite so far off.

30th.—Thrush sang on the roof again.

July 1st.—Goldfinches have young about the garden.

5th.—Bullfinches bite off the tops, and bite open, the seed-pods of the columbines, and eat the unripe seeds.

9th.—A pair of Shrikes very noisy in a tall hedge close to Milton Close, one of the favourite haunts of this curiously local species. They had young out of the nest the next day.

12th.—On two of the recent hot nights, once about 10 p.m. and again about 11 p.m., a Hedge-Sparrow close to the house has burst into a single strain of song. A pair have a nest with eggs in a box-bush just there. In Uruguay I have known the Chingolo Song-Sparrow (*Zonotrichia pileata*) do much the same thing.

16th.—The collection of bird-skins formed by the late Rev. A. Matthews, formerly of Weston-on-the-Green, was sold at Mr. Stevens' rooms. I did not attend the sale, but the skins were examined for use previously, and I afterwards handled a large number of them and bought a few back into the county. With the exception of a little series of the smaller Passeres (all obtained at Weston in 1833 and 1834, and so labelled), the skins were labelled with old parchment tickets. These (with few exceptions) bore only numbers (doubtless referring to a catalogue). The exceptions were a few with "Weston" or "Oxford" added. "Oxford" evidently merely had reference to the place whence the example was forwarded, possibly by some wild-fowl shooter, and not to the actual spot where the bird was killed. And I have little doubt that many of the birds were the examples referred to in Messrs. Matthews' articles on the 'Birds of Oxfordshire and its Neighbourhood,' which were published in this Journal in 1849 and 1850.

The following specimens may be here noticed:—

Night-Heron, "Oxford," adult. Doubtless the one killed at

Standlake in the spring of 1835. This is now in my possession, and I have had it set up.

Gadwall, male and female, "Oxford." These were doubtless shot at Standlake, the male in January, 1833, and the female in the following winter. Male now in my possession.

Garganey, adult, male.

Bittern, "Oxford."

Hen-Harrier, female, "Weston"; now in my possession.

Red-necked Grebe, adult, in winter dress; now in my possession.

Common Sandpiper, "Weston," ♀ 3 June 1834." An interesting date for its occurrence in Oxon.

Hobby, "Weston" (tail worn; had been in confinement).

Dotterel, adult; now in my possession.

Fulmar, "Weston."

Manx-Shearwater, "Weston."

17th.—A pair of Red-backed Shrikes in the old place by the railway on the Lessor Farm, Milcomb. All three favourite haunts are occupied this year, but I have not seen any birds elsewhere.

18th.—My man tells me that a pair of Robins hatched a brood in his garden, and as soon as the young were out of the nest they laid again in the same nest. This brood is now hatched and being fed, he thinks, almost entirely on red currants!

19th.—Warblers swarming in the kitchen garden; Blackcaps, Garden-Warblers, Lesser Whitethroats, and Whitethroats, all feeding on red currants and raspberries. The Robins are as bad as the rest. Very hot, dry weather.

28th.—Rain has fallen. The Warblers spend a good deal of time in the pea-rows and broad-bean stalks, which are badly "blighted" with a lead-grey or black aphid.

August 1st.—Garden-Warbler sang several times; unusual at this date. A Green Sandpiper flew low over my head, calling, near Crouch Hill, where there are several small cattle ponds.

6th.—Goldfinch singing, and Starling a little.

10th.—Saw a Green Sandpiper near Nell Bridge, Adderbury.

11th.—Swifts screaming loudly at evening.

16th.—A few Swifts only.

19th.—Peewits in flock in swede fields.

23rd.—Many Ray's Wagtails in Port Meadow, Oxford.

29th.—Linnets in flocks of a score or more.

30th.—Saw a female Sparrow-Hawk, now a scarce bird just here.

September 1st.—Larvæ of the Death's-head Moth are common this year.

The Landrail, which has of late years become very rare here in the breeding season, and has indeed almost, if not quite, ceased to breed just round here (I did not hear one this summer), passes us on migration in the early autumn (probably from the west), sometimes in considerable numbers. This year, in consequence of there being some standing barley and oats (not too much to "walk") in the early part of the shooting season, we had an opportunity of finding a good many, and I have the following notes of them :—

3rd.—Two shot and another seen. 4th.—Five flushed in a big piece of tall strong oats ; as we had no dog *working*, it is highly improbable that we flushed all the birds there were in it, for even Red-legged Partridges lay well ! Two more put up from seeds and barley. I was told of seven shot on the 2nd at Hook Norton, six of them out of one piece of barley. 6th.—One reported shot out of barley. 10th.—Six flushed (five of them from six acres of barley on a hill). Several have been sent to the stuffers by this date. 19th.—One reported seen. 24th.—Two shot. Two of those killed on the 4th weighed $6\frac{3}{4}$ oz. and $7\frac{3}{4}$ oz. respectively. Two on the 10th, 8 oz. and $8\frac{1}{2}$ oz. All were, I think, young birds. Iris clay-brown with a strong tinge of olive-green. Bill, pinkish-horn ; culmen, darker and browner ; legs and feet, light born. Of the two shot on the 24th one was a small bird weighing only 5 oz., although in good condition. The other, I think, was an adult, and weighed 8 oz. 5 drams. This bird was found in a field of long wheat-stubble, and I saw it running before me down the drills ; it was not going very fast and in a crouching attitude. I had to run in order to flush it. I mention this because I never before *saw* a live Landrail *on the ground* at this season. The stomachs of at least one of those shot on the 10th contained six or eight grains of barley, and the apparent remains of more, with mashed-up insects. Neither of the birds shot on the 24th contained any corn, but their stomachs were full of the remains of insects, chiefly beetles, and a good many little stones, some nearly a quarter of an inch across.

3rd.—Some Meadow-Pipits ; early.

5th.—Linnets in flocks of a hundred or more.

10th.—Flocks of from one to two hundred Linnets.

13th.—Heard two Chiffchaffs.

22nd.—News from Mr. G. W. Bradshaw that he saw yesterday a fine adult male Hobby, in the flesh, shot on Goring Heath. Weighed $5\frac{1}{2}$ oz.

October 1st.—Saw many Goldfinches in different places during a day's shooting, chiefly on Milcomb Hills. This bird, except just after a long severe winter, is by no means uncommon in this part of Oxfordshire.

3rd.—Blackbird singing in a low tone.

4th.—Again.

8th.—Again.

12th.—Flock of about a hundred Greenfinches entirely by themselves.

17th.—A Royston Crow shot about this time near Banbury. Mr. Bartlett told me that about fifteen years ago he had a dozen to preserve in one winter; but it is quite uncommon in this county.

24th.—Pied Wagtail singing.

November.—Swallows departed very early this year. I took no notes on the subject, until I remarked that the birds were all gone. But I do not recollect seeing even one in October. Nevertheless, two were reported as seen at Sibford on the 24th November ('Banbury Advertiser').

2nd.—Fieldfares flew over garden.

3rd.—Starling eating pyracanthus berries.

4th.—Many Redwings and one Brambling. Goldfinches in small charms, several times and places in course of a day's shooting.

6th.—A Golden Plover shot in a ploughed field at South Newington Hill.

13th.—Snow fell in the night.

16th.—Half a score of Siskins in some alders.

17th.—A most destructive frost last night. Thermometer down to 14 deg., and stood at 22 deg. at 10 a.m. to-day.

19th.—When we were shooting in a gale of wind from W.S.W., a male Peregrine-Falcon tried to carry off a Red-legged Partridge,

which, having been shot as it came down wind, fell a long way from the guns. The Partridge being a big one seemed to be too heavy for the Tiercel, which could not rise with it (although it could just carry it along), and had to let it go.

21st.—Obtained a most beautiful example of Leach's Petrel in the flesh, which was picked up dead between Bodicote and Adderbury on the 19th. When uninjured the plumage of this bird looks as if it had a soft grey "bloom" on it. I was also shown a Spotted Crake, shot near Banbury on the 9th inst.

24th.—News of a strange bird caught by the clap-netting boys in a tall hedge on the night of the 22nd. I got possession of it this evening, and found it was a Great Grey Shrike, intermediate between *Lanius excubitor* and *L. major*, the white on the secondaries only to be seen on raising the coverts. Unfortunately, forty-eight hours of confinement with improper food had been too much for it, and it died in the night. It was a male.

29th.—Saw a young Barn-Owl, still retaining some down, and the tail only half grown, which was sent to be stuffed a few days ago.

The coldest November within most people's recollection. Twenty-three degrees of frost was registered on the banks of the Cherwell on the 16th, and frost occurred on more than half the nights of the month, while the day temperature very rarely reached 50 deg. Less than an inch of rain fell, but the weather was unusually foggy.

December 1st.—A few Fieldfares and Redwings only; there are no "haws" this year. A Blackbird a day or two ago ate five berries of *Cotoneaster simondsii*. A Robin eats some of the fowls' corn daily.

3rd.—An increase in the number of Fieldfares and Redwings, of which there are a fair number now. Goldfinches about the fields.

6th.—On Clattercote Reservoir there were about thirty Mallard and about fifty Teal; five Tufted Ducks, three or four Pochards, and a fine adult male Golden-Eye.

10th.—News from Mr. G. W. Bradshaw of a Little Owl shot at Wyfold Court on the 7th November.

12th.—Furious snow-storm from north. The train service on our branch line broken down.

17th.—Flock of about a score of Golden Plovers between South Newington and Barford. Blew and snowed at night.

18th.—Frost and snow-storm.

20th.—Goldfinches in the fields.

23rd.—Frost continues. A female Peregrine-Falcon, the finest I ever saw, was shot at Barford, near here. It measured $18\frac{1}{4}$ inches in the flesh. Head, face, and nape very dark; mantle pale and blue; throat, fore neck, and breast quite unmarked until the extreme lowest breast is reached. On the lowest part of the breast and the belly, the markings are indistinct and broken. Flanks and thighs with very narrow dark bars. Throat, pale parts of the face, the neck, breast, and belly deeply flushed with reddish buff or dull salmon colour. I never before saw this colour so dark or so rich in this species. Legs and feet lemon-yellow, cere the same (a week after death, and probably faded).

27th.—Charm of six Goldfinches and others. Some Bramblings.

28th.—Thaw.

There has been no Song-Thrush song this month or last (and there was but little autumn song); a great contrast to last year. We have, indeed, few Thrushes remaining with us this winter.

NOTES AND QUERIES.

MAMMALIA.

The Lesser Shrew and Bank-Vole in Suffolk.—As the distribution of the smaller mammals in Suffolk appears to be imperfectly known, the following facts may be of interest:—In 1893-94 I found the Bank-Vole (*Arvicola glareolus*) not uncommon in the plantations and woods of Huntingfield (North-east Suffolk). On April 25th, 1901, while on a short visit to the same place, I took about twenty-one pellets of the White Owl (*Strix flammea*). These were afterwards analysed by Mr. Lionel Adams, and amongst the skulls identified were twelve of the Bank-Vole and two of the Lesser Shrew (*Sorex minutus*). The latter species has, I believe, been only taken previously at Blaxhall, in East Suffolk. A small series of twelve pellets from an old willow at Great Thurlow (West Suffolk) also contained a single skull of the Lesser Shrew. Probably further research will prove that it occurs in small numbers throughout the county. — FRANCIS C. R. JOURDAIN (Clifton Vicarage, Ashburne, Derbyshire).

AVES.

Nesting Sites of Blackbird and Song-Thrush.—The note by Mr. R. H. Read in the current 'Zoologist' (*ante*, p. 23) is of considerable interest to me, and I have been looking up my notes of abnormal nesting-sites. There is a particular locality in one of my nurseries where for a long series of years past I find almost annually one or more nests of Blackbirds and Song-Thrushes placed right upon the ground. These have all been found within a piece of land not more than one hundred and twenty yards in diameter, and nowhere else within an area which is some twenty acres in extent. The same birds, or their descendants, have stuck to this ground-nesting, otherwise it is difficult to account for. In April, 1889, I found a couple of Blackbirds' nests at a distance of about one hundred yards apart. One was built on the level ground at the bottom of a dry stone dyke where a stone had been taken out, and within the little archway thus formed. The other nest was placed midway on the grass slope, of about 18 in. high,

that runs along the base of a thorn-hedge. It was in just such a spot as a Robin would have chosen—a little hole in the bank. Somewhat similarly placed Blackbirds' nests have frequently been found since. Then, in the following spring, I found a Song-Thrush's nest on the bare open ground in precisely such a situation as a Sky-Lark would have selected—under the shelter of a tuft of grass. In 1893, within a few yards of this spot, a Song-Thrush's nest was found, built on the ground betwixt rows of young beech-trees that averaged four to five inches high. In subsequent years, as already stated, such ground nests of both Blackbirds and Song-Thrushes have been pretty regularly found. Plenty of hedges and bushes are all around, so that this preference for a lowly site cannot be explained because of any lack of suitable convenience of the usual order. At one time I thought these particular Song-Thrushes might turn out to be of the Hebridean form, which very often, if not always, nests amidst the herbage on rocky ledges; but a close examination did not disclose either the dark colouration or the hooked beak-tips of that peculiar Thrush of our western islands. Of course we know that some of the North American Thrushes build as regularly on the ground as our Thrushes do in trees, bushes, and hedges in normal circumstances. Then there is our own Ring-Ouzel, which is as often a ground-builder as a ledge-builder.—ROBERT SERVICE (Maxwelltown, Dumfries).

Blackbird laying on the Ground.—Mr. Read's note on this subject reminds me of a similar incident that came under my own observation in Fifeshire on May 16th, 1891. At the junction of two walls a large quantity of leaves lay blown together, and in the corner, on the leaves, and without any further attempt at a nest, a Blackbird was sitting on three eggs. On the day mentioned I put the Blackbird off the eggs, and I took for granted that she had laid there through necessity, her own nest mayhap having been harried when the first egg was laid.—ROBERT GODFREY (46, Cumberland Street, Edinburgh).

The Status of the Goldfinch (*Carduelis elegans*) in Britain.*—*North Wales* appears to be a stronghold of the Goldfinch. In Montgomery from Welshpool to the west it is comparatively common, and breeds freely about Welshpool, whilst farther up the Severn Valley to the source it is more local and scarcer.

Yorkshire (West Riding).—In the West Riding I know of no authentic breeding of the Goldfinch; formerly it used to breed sparingly (within

* We have received the following notes on this subject since our last issue.—ED.

the memory of living men). About two years ago I saw a flock of about fifteen to twenty birds feeding on some alders fringing the River Aire, near Bingley. This is the only time I have met with this species in the West Riding, though I have many times looked anxiously for it.—ROSSE BUTTERFIELD (Wilsden, Bradford).

Isle of Man.—It had become very infrequent, but with the last decade there have been signs of increase. Flocks have been noticed, especially in the north of the island. — P. S. RALFE (Castletown, Isle of Man).

East Sussex.—During the breeding season I have noticed no diminution; large numbers of immigrants appear in autumn and throughout winter. I do not think it can be said there has been any diminution during the period 1894–1902. — W. RUSKIN BUTTERFIELD (St. Leonards-on-Sea).

Notts.—No doubt that its numbers have seriously declined within memory of the present generation. An old man, whose young days were passed in poaching and birdcatching, has several times told me that he has on occasions caught fifty "Proud-Tailors" before breakfast. Now it would take a number of years to see the same total.—CHAS. E. PEARSON (Hillcrest, Lowdham, Notts).

Hampshire.—When collecting information twelve years ago from all parts of this county for a list of Hampshire birds, I found a general consensus of opinion that it was increasing, thanks to the Bird Protection Act. Since then have lived in two parishes on south side of New Forest, and found it fairly common and nesting. Mr. Meade Waldo, writing in 1900 ('Victoria History Hants'), says, "decidedly increased in numbers during the last ten years." — J. E. KELSALL (Milton, Lymington).

North Wales.—Roughly speaking, the Goldfinch is most numerous in the south-east of Montgomeryshire and parts of Merioneth; whilst it occurs in many scattered lowland districts throughout the other counties in fair numbers. It has not been noticed as increasing except in the first-named county.

Anglesey.—Mr. S. G. Cummings says it is fairly common in East Anglesey in suitable places, and Mr. R. J. Edwards states that at Holyhead it is rather plentiful, notwithstanding birdcatchers. Others speak of it as rather scarce. I am told it does occur on the south-west coast, but never met with it there—district not suitable. Occurs at lighthouses in November.

Carnarvonshire.—Owing to the mountainous character of the county the Goldfinch is scarce, except on the lowlands, which are chiefly

confined to the seaboard, and even there it is by no means numerous as a rule. The only district where it is plentiful is in the Conway Valley up to Bettws-y-Coed.

Merioneth.—Much of this county also is too mountainous for the Goldfinch, but it occurs in small numbers along the western seaboard, and is fairly common in some of the valleys, as at Llanbedr, Corris, and round Bala. It is particularly numerous in the Dovey Valley from the estuary up to Dinas Mawddwy, and all round Machynlleth, where I saw nests in 1901.

Flintshire and Denbighshire.—Occurs in many parts of these counties—in fact, seems to be generally distributed—but is not numerous, except in the Vale of Clwyd, where it may be described as rather common.

Montgomeryshire.—Generally distributed throughout the county, but is less numerous in the western parts than the eastern. It is particularly plentiful around Welshpool, Llanfair, and Montgomery, and large numbers are caught in the autumn to be sold as cage-birds. In this district the bird seems to be on the increase, and there is little doubt that the Protection Act has done good, since it makes it impossible to expose the birds for sale in the close season.—H. E. FORREST (Brayston Hill, Shrewsbury).

A Habit of the Lesser Redpoll (*Linota rufescens*).—Mr. Blathwayt relates his experience (*ante*, p. 26) of the nesting habits of the Lesser Redpoll in Lincolnshire, and asks for information from naturalists in other parts of Britain, confirmatory or otherwise, as to its susceptibility to forsake its nest on the occasion of its being disturbed. It is far from being an uncommon nesting species in this district, consequently I have had considerable experience of its nesting habits, but have never known it forsake its nest, however much it has been disturbed. Only last season a friend of mine interested in bird-nest photography expressed a wish that I should find him the nest of the species, which I did, built on a horizontal branch of a Scotch-fir about nine feet from the ground. It was building when it was found, and, although much disturbed, almost daily, it still continued its operations. When it had begun to sit my friend photographed the nest and eggs, but previously to doing so it was necessary to lop the twigs in the vicinage of the nest, thus altering altogether the character of its surroundings; yet notwithstanding this treatment it persistently sat on, and ultimately brought off its young.—E. P. BUTTERFIELD (Wilsden, Yorkshire).

Wood-Lark in West Suffolk.—On Jan. 14th I saw two Wood-Larks (*Alauda arborea*) in the flesh at Mr. Travis's shop in Bury, which had

been shot at Rougham. This is a bird little known in Suffolk, though it breeds in the county; and these are the only ones I ever saw in the flesh. They were probably migrants from the north which the hard weather had brought down, and in no way connected with those which come into Suffolk later in the year for the purpose of nesting.—
JULIAN G. TUCK (Tostock Rectory, Bury St. Edmunds).

Hybrids between Domestic Pigeon, ♂, × *Columba œnas*, ♀.—In 'The Zoologist' for June, 1900 (p. 281), when recording a hybrid betwixt a Homer Pigeon and a Collared Turtle, I described how a friend had failed to rear some hybrids obtained betwixt various of his Domestic Pigeons, and Stock-Doves he had hatched and reared from eggs obtained from nests in the sea-cliffs near his house. Invariably the young ones died within a few days after hatching out. In 1901 the same gentleman (Mr. James Blacklock, Southwick) obtained a young Stock-Dove, in the squeaker stage, that had been caught by the keepers on the estate when ferreting rabbits. It had bolted into the net, rabbit fashion. This bird was placed amongst the Pigeons, and soon became quite at home. Late in the summer of 1902 it paired with a Blue Tumbler cock, and they successfully brought up a strong and healthy couple of young, which I had an opportunity of examining on 18th November last. They had then parted with nearly all evidences of adolescence. In appearance they bear much more resemblance to their maternal parent than they do to their father. All four were flying with the other Pigeons in the courtyard, and no person could have imagined for a moment that the Stock-Dove had ever been a wild bird. Perhaps the term "wild bird" may not truly apply, because it doubtless looked out upon the world for the first time when it bolted into the rabbit-net.—ROBERT SERVICE (Maxwelltown, Dumfries).

Protective Colouration of Birds' Eggs.—Looking over old diaries I came across the following instance, which may be of interest to readers of 'The Zoologist':—On May 4th, 1893, I rescued five fresh (*i. e.* unincubated) Great Crested Grebe's eggs, which however, I am glad to say, were not taken in this neighbourhood, from being blown. On the following day I took them over to Hickling Broad, and put two, two, and one into the nests of three Coots, which had not yet laid their own full complement of eggs, removing three, three, and one Coots' eggs in doing so. Within two days Rooks—or Crows—had sucked every one of the Grebe's eggs, whilst numerous nests full of Coots' eggs were left unharmed near by. The slight difference in the ground colour and the absence of the small black markings were appa-

rently sufficient to attract the leery eyes of the prowling *Corvidæ*. Hence the necessity for, or one reason of, the "Loon" covering her eggs so deftly whenever she leaves them, an action which is so rapidly performed that my binocular-aided eyes have sometimes been hardly sharp enough to follow, and that at close quarters. There was a correspondence in 'The Zoologist' (1898-1899) about the Moorhen covering its eggs on leaving the nest. This habit is not indulged in hereabouts, at any rate according to my own observations, which have been long and frequent; nor have any of the local "egging" marshmen whom I have consulted on the subject ever noticed it, although one of them was sufficiently observant to mention to me the similarity of the surface markings on Coots' eggs to the black fungoid discolourations on dead reed-leaves long before I saw any allusion to this interesting fact in print. When at Cambridge (1876-1879) I found several Moorhens' nests on and around the much-frequented back river, but never even there observed any other attempt at concealment beyond the partial bending down of tall vegetation over and above the entire nest. This habit is also indulged in, to a less degree, by the Redshank. The Wild Duck and Pheasant often build in very similar situations, and their egg-shells vary but little in shade; yet the land-bird leaves hers open, whilst the water-fowl compensates for the slightly less pigment in hers by covering them up.—MAURICE C. H. BIRD (Brunstead Rectory, Stalham).

AMPHIBIA.

Larvæ attacking Toad (*Bufo vulgaris*).—One day last summer I found a Toad which presented a rather curious appearance, having both nostrils considerably enlarged. I took it home and placed it in a case for more careful examination later on. This I was prevented from doing for several days, and when I next looked, it was lying dead on the bottom of the case, and with one of the eyes and the greater part of one side of the head entirely eaten away by a number of pale yellow larvæ about one-third of an inch in length, which from their appearance I judged to be the larvæ of a dipterous insect; but whether the larvæ had attacked the Toad after being hatched from the egg, or whether the eggs had been hatched inside the nostrils of the Toad, I was unable to decide. I should be glad to know from some of your readers (1) if this occurrence is common; (2) what species of Diptera or other insect it is which makes the attack. The Toad in other respects seemed in good condition.—B. J. HORTON (305, Stratford Road, Sparkbrook, Birmingham).

[The larvæ above referred to as attacking a Toad were doubtless those of *Lucilia sylvarum*, Mg. (family *Muscidæ*), one of the common greenbottle flies. Such cases are not uncommon, and entomological literature contains a number of records of the destruction of Toads by the maggots of this fly. It would appear that the eggs are deposited on the Toad's back, and that the larvæ on hatching make their way into the creature's eyes or nostrils. Toads are sometimes attacked in a similar manner by the larvæ of blowflies (*Calliphora*), cf. L. G. Guthrie, "On a Toad killed by the Larvæ of Blow-Flies," 'Entomologist's Monthly Magazine,' 1892, pp. 9-12. — E. E. AUSTEN (Brit. Mus., South Kensington).]

NOTICES OF NEW BOOKS.

The Tanganyika Problem; an Account of the Researches undertaken concerning the Existence of Marine Animals in Central Africa. By J. E. S. MOORE, F.R.G.S. Hurst & Blackett.

It is well within the memory of many, when Burton first discovered Lake Tanganyika. Africa was then a dark continent, to be only traversed by the adventurous leader of a big expedition; to-day it is an ordinary goal for a sportsman, and will soon be tramped by the Cook's tourist. The discovery of the lake was the event of a geographical season; we are now studying the origin of its fauna, which is the "Tanganyika problem" which this volume has brought into the domain of real zoological philosophy. The interest in the question has long been accumulating from the time when Speke brought home a few shells he had picked up on its shores, and which were recognized as curiously marine. Then Jelly-fishes were discovered in the lake by Dr. Böhm, and a British expedition—purely biological—was despatched in 1896 under the direction of the author of this work. The most definite result of that expedition appeared to be that "the sea had at some former time been connected with the lake, but when or how remained a mystery." Prof. Ray Lankester, who had organized the first expedition, now initiated a second one, and Mr. Moore again started in 1899 for the lake, whose marine molluscs compare, every one, with individual prototypes in the remains of the old Jurassic Seas.

The problem was complicated by one of those speculative assumptions which so often crystallize as dogmas in scientific generalizations. Sir Roderick Murchison, from an examination of then available geological and other facts, had concluded that the interior of Africa had never been beneath the sea, and considered his view was confirmed by the absence south of the equator "of all those volcanic activities which we are accustomed to associate with oscillations of *terra firma*." Consequently, to

prove his thesis, Mr. Moore had to disprove this theory before offering his own explanation of the facts. His investigation of the geological characters of Central Africa goes to prove that there is no foundation for the Murchison hypothesis, and that there is evidence of vast disturbance in the region of the great lakes. Mr. Moore's conclusion is that Tanganyika was originally stocked with halolimnic animals * from a western sea, of which the great lake itself, and the vast back waters of the Congo, may be said to be the last remains. Owing to geological changes these became a more and more land-locked sea, "and in the course of time the water in these areas became freshened, and consequently a large section of the old marine fauna died out, while those fishes which could withstand the change migrated to a certain extent throughout the fresh waters of the continent." The reader is not simply asked to accept this proposition, but is afforded a long zoological argument, based on well-marshalled facts, which makes a contrary opinion almost impossible.

We wish space would allow mention of many incidental facts and observations recorded in this volume: such as the opinion as to the origin of park-lands, which the writer of this notice has often seen and pondered in the Transvaal; that floral changes in these areas are due to physical conditions, and not to the struggle for existence among different species; and that in many of the great lakes "there is hardly so much variety of life as there is in an ordinary American or European puddle." The recently discovered fishes of Lake Tanganyika, which consist of eighty-seven species, of which seventy-four have been described as new, are enumerated with Mr. Boulenger's original descriptions, accompanied by a reproduction of Mr. Green's excellent drawings of the same. The Molluscs, Gastropods, Crustacea, Medusæ, Sponges, Protozoa, and new Polyzoan receive ample treatment; while the whole work is so lavishly illustrated as to render it a notable addition to our knowledge of African zoology.

* "Organisms possessing definitely marine and somewhat archaic characters."

EDITORIAL GLEANINGS.

"A Contribution to our Knowledge of the Mole (*Talpa europæa*)" is the title of a paper contributed by Mr. Lionel E. Adams to the 'Memoirs and Proceedings of the Manchester Literary and Philosophical Society' (1903). This memoir is a somewhat exhaustive one. It refers to the whole literature on the subject, from Le Court (1798), Saint-Hilaire (1829), Blasius (1857), to modern writers. A number of illustrations are given to show the different structures of Mole-fortresses, and the writer concludes that "these galleries are the natural, incidental, and inevitable outcome of the work of excavating the nest-cavity, and piling up the superincumbent mound." There is a seemingly enormous proportion of males to females in this animal, but Saint-Hilaire discovered by dissection that the virgin Mole has the same external appearance as the male, and Mr. Adams has given a full translation of the main points in Saint-Hilaire's demonstration. Amongst the enemies of the Mole, the author mentions a fox-terrier of his, who successfully hunted these animals. The writer of this notice also once possessed a fox-terrier whom he scarcely ever took out for a ramble over and in the Surrey hills and valleys without one or more Moles being found, killed, and triumphantly produced by his canine companion, and this without the slightest incitement.

'The Asian Sporting Newspaper' for Dec. 13th, 1902, has given a full biographical estimation of Dr. P. L. Sclater, who, as generally known, has vacated the post he has so long and ably held as Secretary of the Zoological Society of London. One paragraph may at least find place here :—

"When Mr. Sclater took over the reins of the Society in 1859 the number of Fellows on its roll was 1716, the income for the previous year £14,084, and the number of admissions to the gardens 333,980. For the last year of the century the number of Fellows was 3250, the income £28,772, and the number of admissions 697,178. A greater and more satisfactory progress during forty years could scarcely be expected, or even desired. And all this is mainly, if not entirely, due to the untiring and ceaseless energy of the Secretary."

At the meeting of the Zoological Society, held on Jan. 20th last, Mr. F. E. Beddard read a communication dealing with the surface anatomy of the cerebral convolutions in *Nasalis*, *Colobus*, and *Cynopithecus*. The wide differences which the brain of *Cynopithecus* shows from that of the Baboons and its many points of resemblance to the brain of *Semnopithecus* were pointed out. *Colobus* was shown to closely resemble *Macacus* in the structure of its brain. Three brains of *Nasalis* were reported on, two of which the author owed to the kindness of Dr. Charles Hose, of Borneo. It was stated to be practically impossible to distinguish the brain of this genus from that of *Semnopithecus*.

MR. J. A. ALLEN contributes a most interesting article to the last issue of 'The Auk' on the subject of the A. O. U. Check-list; its history and its future. It appears that the new and ever-increasing workers at ornithology expend a large amount of energy on bibliographical studies and consequent changes in nomenclature. This will probably increase in future, and applies to Europe as much as to America, and is not confined to ornithology. "The danger of excessive splitting is greater now than ever before, since we have reached a point where comparatively few strongly marked local forms remain to be discovered and named, while the number of enthusiastic young workers is steadily increasing. Plainly, not every degree of differentiation that can be recognized by the trained expert needs recognition by name, and not every slightly differentiated form that can be distinguished readily on comparison of a large series of specimens should be considered as entitled to a place in a list of North American birds."

THE following interesting communication is to be found in 'The Condor' in its last issue, commencing vol. v. :—

"*Do Wild Birds die instantly?*—Mr. Wm. Earl Dodge Scott, in an article on birds in 'The Outlook' of July 5th, 1902, has made a statement that is somewhat remarkable in that it shows how differently Nature reveals herself to different observers, and especially remarkable because so emphatically backed up by his reference to hunters and others whose occupations teach them to observe. He states that not only do birds die instantly—which term must be here used in a comparative sense, and is a little strong—when injured or afflicted with illness, but also that in all his experience he has never come across a sick bird or animal in a wild state, nor met with anyone else who has done so. My attention was attracted by this statement, because,

although Mr. Scott probably has had much greater opportunities for observation than I, my experience has been very different from his. This may perhaps be accounted for by the mildness of climate, or a lower proportion of bird enemies in the Pacific Coast collecting grounds; but it is a fact that occasionally sick or suffering birds and animals are to be found in California. For example, I have found dead sea-birds along the shore, with no signs of their having been injured, in a greatly emaciated condition, showing that they had suffered for some time before death. I have shot land-birds that were woefully thin and weak, and have even taken one or two that were so afflicted with some cutaneous disease that it seemed advisable not to handle them. The Californian Jack-rabbit suffers to a great extent from lumps caused by a parasite, and these are sometimes so large, and weaken the animal to such a degree, that it can hardly get out of one's way. Besides eye-witnesses who can verify some of these observations of my own, there must be others who have had similar experiences, and consequently Mr. Scott's statement cannot be accepted as an absolute rule.—JOSEPH MAILLIARD."—A writer under the initials W. K. F. adds:—"My own experience agrees perfectly with that of Mr. Mailliard. During December, 1900, while at Monterey Bay, I saw a Heermann Gull and many emaciated Brandt Cormorants which were dying a slow death, and only yesterday (Dec. 22nd, 1902) saw another during a short walk near the Point Pinos Light. On Laysan Island, Hawaiian group, I saw a number of sickly birds among the seafowl, and found a very rare Petrel in this condition. Mr. Scott's rule does not obtain among mammals, for, besides the example offered by Mr. Mailliard, I found a large Sea-Lion near Cypress Point, which existed for days in a perfectly helpless and moribund condition, until Prof. Harold Heath and myself mercifully killed it. Dissection showed no internal injuries nor parasites, while the teeth rather pointed to old age."

WE are glad to see from the last published Report of the Australian Museum at Sydney that the preparation of the new edition of Mr. A. J. North's work has been continued. It is practically new, although to some extent based on the former catalogue, and it has been decided to call it "Special Catalogue, No. 1, Nests and Eggs of Birds found breeding in Australia and Tasmania." The first part was issued in June.

